

What is claimed is:

- 1 1. A surgical procedure performed on the heart of a patient, comprising the
- 2 steps for:
- 3 forming an entry incision on the patient;
- 4 dissecting tissue along a tract from the entry incision toward the patient's
- 5 heart;
- 6 forming an opening in the pericardium near the apex region and into the
- 7 intrapericardial space of the patient's heart through the entry incision;
- 8 advancing a surgical instrument through the opening in the pericardium near
- 9 the apex region and along a path lateral to the left pulmonary veins into the
- 10 transverse pericardial sinus;
- 11 forming an opening in a first reflection disposed between the left and right
- 12 superior pulmonary veins;
- 13 entering through the opening formed in the first reflection to form an
- 14 opening in a second reflection disposed between the superior vena cava and the
- 15 right superior pulmonary vein;
- 16 advancing the surgical instrument through the opening formed in the second
- 17 reflection;
- 18 forming an opening in a third reflection disposed between the inferior vena
- 19 cava and the left inferior pulmonary vein;

20 advancing the surgical instrument through the opening formed in the third
21 reflection into the oblique pericardial sinus to substantially surround the left and
22 right pulmonary veins with the surgical instrument.

- 1 2. The surgical procedure according to claim 1 including:
 - 2 advancing a tissue-ablating probe within the surgical instrument to
 - 3 substantially surround the left and right pulmonary veins; and
 - 4 energizing the tissue-ablating probe to ablate atrial tissue along the path near
 - 5 the tissue-ablating probe.
- 1 3. The surgical procedure according to claim 1 in which the entry incision is
2 formed in the subxiphoid location; and
3 dissecting tissue includes exposing the linea alba within a subxiphoid entry
4 incision, and forming a tract of dissected tissue between the entry incision and the
5 apex region of the patient's heart.
- 1 4. The surgical procedure according to claim 1 in which the entry incision is
2 formed at a subcostal location;
 - 3 dissecting tissue includes exposing the anterior rectus sheath within the
 - 4 subcostal entry incision;
 - 5 incising the anterior rectus sheath and retracting the rectus muscle to expose
 - 6 the posterior rectus sheath;

7 incising the posterior rectus sheath to expose the inferior border of the costal
8 margin;

9 forming a tract through the incisions and the muscular diaphragm into the
10 pleural cavity; and

11 forming an opening through the pleura to expose the pericardium near the
12 apex region of the patient's heart.

1 5. The surgical procedure according to claim 1 in which forming an opening in
2 one of the first, second and third reflections includes grasping a portion of the
3 reflection; and

4 cutting the grasped portion of the reflection to form an aperture therein.

1 6. The surgical procedure according to claim 1 in which advancing the surgical
2 instrument through the opening formed in the second reflection includes grasping
3 through the opening formed in the first reflection the surgical instrument
4 positioned within the transverse pericardial sinus for manipulating therein the
5 surgical instrument through the opening formed in the second reflection.

1 7. The surgical procedure according to claim 1 in which advancing the surgical
2 instrument through the opening formed in the third reflection includes grasping
3 through the opening formed in the third reflection the surgical instrument advanced
4 through the opening formed in the second reflection; and

5 pulling the grasped surgical instrument through the opening formed in the
6 third reflection into the oblique pericardial sinus to substantially complete a loop of
7 the surgical instrument surrounding the left and right pulmonary veins.

1 8. The surgical procedure according to claim 1 performed with an endoscopic
2 cannula having an instrument channel, the procedure including:

3 advancing the endoscopic cannula along a path through the entry incision
4 and along the tract of dissected tissue and through the opening formed in the
5 pericardium near the apex region of the patient's heart, and lateral to the left
6 pulmonary veins;

7 advancing the surgical instrument includes advancing the surgical
8 instrument through the instrument channel of the endoscopic cannula disposed
9 along said path, and into the transverse pericardial sinus;

10 retracting the endoscopic cannula from along the said path, leaving the
11 surgical instrument disposed within the transverse pericardial sinus;

12 re-entering the endoscopic cannula through the entry incision and along the
13 tract of dissected tissue and through the opening formed in the pericardium near
14 the apex region, and across the oblique pericardial sinus toward the first reflection;
15 and

16 passing an instrument through the instrument channel of the endoscopic
17 cannula so positioned to form said opening in the first reflection.

1 9. The surgical procedure according to claim 2 in which a distal end of the
2 surgical instrument is clasped to a portion of the surgical instrument disposed
3 intermediate the opening formed in the pericardium near the apex region and the
4 left pulmonary veins to form a loop of the tissue-ablating probe at least during
5 energization thereof.

1 10. A kit of surgical instruments for ablating tissue in the heart of a patient, the
2 kit comprising:

3 an endoscopic cannula including an elongated body having one lumen
4 therein for supporting an endoscope therein, and including a transparent tissue-
5 dissecting tip disposed at a distal end of the body substantially aligned with an
6 endoscope therein, the elongated body including another lumen disposed eccentric
7 to the one lumen for slidably supporting a surgical instrument therein;
8 a first surgical instrument including an instrument body having a tissue-
9 grasping end effector that is mounted at a distal end thereof and that is linked
10 through the instrument body to a manual actuator disposed at a proximal end of the
11 instrument body for remotely manipulating the end effector from the proximal end,
12 the first surgical instrument including a tubular element slidably and rotatably
13 overlying the instrument body and having a tissue-cutting distal end thereon for
14 cutting tissue grasped by the end effector, the tubular element being configured and

15 dimensioned to slide and rotate within said another lumen of the endoscopic
16 cannula; and

17 an enclosure surrounding the endoscopic cannula and the first surgical
18 instrument in a substantially sterile environment.

1 11. The kit according to claim 10 including a second instrument having a hollow
2 sheath with a bore therethrough for receiving a tissue-ablating probe therein, the
3 sheath having a sectional dimension sized to slide within said another lumen of the
4 endoscopic cannula.